

# Missouri Department of Natural Resources



## PUBLIC NOTICE

### APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: September 10, 2004

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, ATTN: Cynthia S. Davies, Water Section Chief. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The department may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curd v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by October 10, 2004 or received in our office by 5:00 p.m. on October 13, 2004. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits, comments, and other information including copies of applicable regulations are available for inspection and copying at the department's website, [www.dnr.mo.gov/wpscd/wpcp/homewpcp.htm](http://www.dnr.mo.gov/wpscd/wpcp/homewpcp.htm), or at the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: September 10, 2004

Permit Number: MO-0100391

Southwest Regional Office

<b>FACILITY NAME AND ADDRESS</b>	<b>NAME AND ADDRESS OF OWNER</b>
Ozark Mountain Resort WWTF 146 Ozark Mountain Resort Drive Kimberling City, MO 65686	Silverleaf Resorts, Inc. 1221 River Bend Drive, Suite 120 Dallas, TX 75247
<b>RECEIVING STREAM &amp; LEGAL DESCRIPTION</b>	<b>TYPE OF DISCHARGE</b>
Unnamed tributary to Table Rock Lake NW ¼, SE ¼, SE ¼, Sec. 16, T22N, R23W Stone County	Domestic, modification

Plans and specifications for this facility have not been reviewed by the Department of Natural Resources. The design engineer, a registered Missouri professional engineer, has certified that the plans and specifications meet all requirements of 10 CSR 20-Chapter 8 Waste Treatment Design.

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**  
MISSOURI CLEAN WATER COMMISSION



## MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended.

Permit No. MO-0100591

Owner: Silverleaf Resorts, Inc.  
Address: 1221 River Bend Drive, Suite 120, Dallas, TX 75247

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Ozark Mountain Resort  
Facility Address: 146 Ozark Mountain Resort Drive, Kimberling City, MO 65686

Legal Description: NW ¼, SE ¼, SE ¼, Sec. 16, T22N, R23W, Stone County  
Receiving Stream: Unnamed tributary to Table Rock Lake (U)  
First Classified Stream and ID: Table Rock Lake (L2) (07313)  
USGS Basin & Sub-watershed No.: (11010001-170003)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

### **FACILITY DESCRIPTION**

Outfall #001 – Resort / Sewerage Works – SIC # 7999 / 4952

Extended aeration / chemical addition for phosphorus removal / tertiary settling / tertiary filtration / chlorination with detention / sludge disposal by contract hauler.

Design population equivalent is 900.  
Design flow is 90,000 gallons per day.  
Design sludge production is 23.14 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date (Revised)

Stephen M. Mahfood, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

Expiration Date

R. Bruce Martin, Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 6	
					PERMIT NUMBER MO-0100391	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month**	24 hour total
Biochemical Oxygen Demand <sub>5</sub>	mg/L		30	20	once/month**	****
Total Suspended Solids	mg/L		30	20	once/month**	****
pH – Units	SU	***		***	once/month**	****
Fecal Coliform (Note 1)	#/100 ml	1000		400	once/month**	****
Total Residual Chlorine as Cl <sub>2</sub> (Note 2)	mg/L	1.0		1.0	once/month**	****
Total Phosphorus as P	mg/L			0.5	once/month**	****
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

#### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* Reports shall be submitted by the 28<sup>th</sup> day of the month following the reporting period, e.g. Reporting period is the month of March (samples collected < each weekday, daily, weekly, etc. > ), report due by April 28<sup>th</sup>.
- \*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- \*\*\*\* A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) If the TRC limit in this permit is 0.01 mg/L or 0.2 mg/L, you must use an analytical method that has a quantification limit of no greater than 0.05 mg/L TRC. For reporting purposes on the discharge monitoring report (DMR), all analytical values below 0.05 mg/L shall be reported as "< quantification limit." All analytical values at or above the quantification limit of 0.05 mg/L shall be reported as the measured value. The permittee shall report the quantification limit in the remarks section of the DMR.

The average monthly effluent values for TRC will be determined by assuming that analytical results below the quantification limit are equivalent to 0 mg/L when calculating the monthly average.

The daily effluent value will be considered equal to 0 mg/L if it is below the quantification limit.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 - Total Residual Chlorine (TRC) (continued)

- (b) If the TRC limit in this permit is 1.0 mg/L; you must use an analytical method with a quantification limit between 0.2 and 0.5 mg/L. All analytical values below the quantification limit shall be reported as "< quantification limit." All analytical values at or above the quantification limit shall be reported as the measured value.

The average monthly effluent values for TRC will be determined by assuming that analytical results below the quantification limit are equivalent to 0 mg/L when calculating the monthly average.

The daily effluent value will be considered equal to 0 mg/L if it is below the quantification limit.

- (c) Disinfection is required year-round unless the permit specifically states that "Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (d) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**
- (e) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 mg/L" TRC.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
- (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
- (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - (2) controls any pollutant not limited in the permit.
- (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
- (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
- (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

C. SPECIAL CONDITIONS (continued)

- (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.
6. Water Quality Standards
- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
  - (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

#### D. SCHEDULE OF COMPLIANCE

Please note that the engineering design includes technology not addressed in Missouri Clean Water Commission Regulations 10 CSR 20-Chapter 8 design standards. To assess the effectiveness of the new technology at this facility, the following schedule of compliance must be followed.

1. The permittee acting under the supervision of a professional engineer registered in Missouri shall at a minimum, collect and test samples of wastewater treatment facility effluent as outlined in this permit, measure flow as outlined in this permit, and shall record all maintenance and operational problems experienced with the wastewater treatment facility during the first 34 months of operation. Other sample collection and testing including influent samples, and samples before and after each unit operation or group of unit operations, and other record keeping shall be done at the discretion of the professional engineer as needed to assess the new technology.
2. Within one (1) year of the date of issuance of this permit, the permittee shall submit a preliminary engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first ten (10) months of operation. At the minimum, this evaluation shall include:

- (a) Calculation of the mean (average) test results for all wastewater treatment facility effluent sample results collected under this permit for all parameters that have a maximum average monthly permit limit except pH.
- (b) Calculation of the standard deviation of all test results noted above based on the following:

$$\text{Standard deviation} = \left[ \frac{(R_1 - \text{mean})^2 + (R_2 - \text{mean})^2 + (R_3 - \text{mean})^2 + \dots + (R_n - \text{mean})^2}{n - 1} \right]^{1/2}$$

where  $R_1, R_2, R_3$ , etc. are the individual sample results  
 $n$  is the total number of samples

- (c) Calculation of the Coefficient of Variation (cv) for all test results noted above based on the following:

$$cv = \left[ \frac{\text{Standard Deviation}}{\text{Mean}} \right]$$

- (d) Calculation of the Standard Deviation of Logarithms ( $\sigma$ ) for all test results noted above based on the following:

$$\sigma = \left[ \ln \left[ \frac{cv^2 + 1}{4} \right] \right]^{1/2}$$

where  $\ln$  is the natural logarithm to base  $e$   
 $e$  is 2.718281828

- (e) Calculation of the Performance Standard (P) for 95<sup>th</sup> percentile probability for all test results noted above based on the following:

$$P = (\text{mean})e^{(z\sigma - 0.5\sigma^2)}$$

where  $z$  is 1.645 for 95 percentile probability

- (f) The new technology will be deemed successful if the performance standard for 95<sup>th</sup> percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.

D. SCHEDULE OF COMPLIANCE (continued)

- (g) The preliminary engineering report shall also assess any operational or maintenance problems experienced during the initial ten (10) months of operation and shall describe all measures taken to overcome these problems. The engineer shall provide an assessment of whether operation or maintenance problems are sufficiently serious to require replacement of the new technology.
3. Within three (3) years of the date of issuance of this permit, the permittee shall submit a final engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first 34 months of operation including all of the items described in the initial ten (10) month evaluation. Again, the new technology will be deemed successful if the performance standard for 95<sup>th</sup> percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.
4. If the new technology fails to meet the 95<sup>th</sup> percentile probability performance standard for any parameter, or if the engineer assesses the operation and maintenance problems to be sufficiently serious to require replacement of the new technology, the permittee shall submit engineering report, plans, specifications prepared by a professional engineer registered in Missouri along with construction permit application forms, filing fee to Southwest Regional Office within one hundred twenty (120) calendar days of the date of submittal of the preliminary or final engineering report evaluation that identified the failure.

These documents shall outline replacement of the failed new technology with standard technology listed in Missouri Clean Water Commission Regulation 10 CSR 20 Chapter 8.

5. Within one hundred eighty (180) calendar days of receiving the construction permit, the permittee shall construct the replacement facilities and submit the Statement of Work Complete prepared by the professional engineer to Southwest Regional Office.



